



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/819,265	03/27/2001	Douglas L. Voigt	10003993-1	4301

7590 04/16/2003

HEWLETT-PACKARD COMPANY  
Intellectual Property Administration  
P.O. Box 272400  
Fort Collins, CO 80527-2400

EXAMINER

NGUYEN, CINDY

ART UNIT	PAPER NUMBER
----------	--------------

2171

DATE MAILED: 04/16/2003

4

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/819,265

Applicant(s)

VOIGT, DOUGLAS L.

Examiner

Cindy Nguyen

Art Unit

2171

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 28 March 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-29 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 March 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

### Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2, 3.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

### **DETAILED ACTION**

This is in response to application filed on 03/28/01 in which claims 1-29 are presented for examination.

#### **1. *Information Disclosure Statement***

The information disclosure statement filed on 03/28/01 and 12/23/02 are in compliance with the provisions of 37 CFR 1.97, 1.98 and MPEP § 609. Because it has been placed in the application file, and the information referred to therein has been considered as to the merits.

#### **2. *Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**3. Claims 1-10, 12, 13, 15, 21 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pothapragada et al. (U.S. 6442682) (Pothapragada) in view of Taoda (U.S. 5857459).**

Regarding claims 1, 15, 21 and 26, Pothapragada disclose: A method, a system and computer produce for accessing a data storage device controlled by array controller processes, the method including the steps of:

Art Unit: 2171

(c) if the file system access operation request specifies a divertible operation, diverting the divertible operation from file system processes associated with the data storage device to the array controller processes (308, fig. 1 and corresponding text, Pothapragada);

(d) performing the divertible operation with the array controller processes (col. 7, lines 13-30, Pothapragada); and

(e) updating a file system data management arrangement with operation result information from the array controller processes, the file system data management arrangement being controlled by the file system processes (342, fig. 1 and corresponding text, Pothapragada).

However, Pothapragada didn't disclose: receiving a file system access operation request; and determining if the file system access operation request specifies an operation comprising a divertible operation. On the other hand, Taoda discloses: receiving a file system access operation request (ST21, fig. 13 and corresponding text, Taoda); and determining if the file system access operation request specifies an operation comprising a divertible operation (ST22, fig. 13 and corresponding text, Taoda). Thus, at the time invention was made, it would have been obvious to a person of ordinary skill in the art to include receiving and determining if the file system access operation request specifies an operation comprising a divertible operation in the system of Pothapragada as taught by Taodo. The motivation being to enable the user to read and write the large file from the storage devices faster.

In addition, Pothapragada/Taoda disclose: non-divertible operations in a received file system access operation request (312, 314, fig. 1 and corresponding text, Pothpragada); file system program code for performing each non-divertible operation included in a received access

Art Unit: 2171

operation request and maintaining a file system data management arrangement which includes information for each file in the file system (fig. 4 and corresponding text, Pothapragada);

an input/output arrangement connected to the data processing means for passing communications between a file system client and the data processing means (586, 590, 592, 594, 596, fig. 11 and corresponding text, Pothapragada); and an interface between the data processing means and the data storage device (558, fig. 11 and corresponding text, Pothapragada).

Regarding claim 2, all the limitations of this claim have been noted in the rejection of claim 1 above. In addition, Pothapragada/Taoda disclose: wherein the operation comprises a create operation and wherein the operation result information includes a reference to the array storage space to which data for the file specified in the create operation is to be written (col. 6, lines 12-33, Pothapragada).

Regarding claim 3, all the limitations of this claim have been noted in the rejection of claim 2 above. In addition, Pothapragada/Taoda disclose: wherein the step of updating the file system data management arrangement includes causing the file system processes to produce an entry in the file system data management arrangement which includes identifying information for the specified data and a reference to the array storage space to which the specified data is to be written (col. 7, lines 44-64, Pothapragada).

Regarding claim 4, all the limitations of this claim have been noted in the rejection of claim 1 above. In addition, Pothapragada/Taoda disclose: wherein the divertible operation comprises a read operation and further including the step of reading an array storage space

Art Unit: 2171

reference for the file specified in the read operation (fig. 6 and corresponding text, Pothapragada).

Regarding claim 5, all the limitations of this claim have been noted in the rejection of claim 4 above. In addition, Pothapragada/Taoda disclose: wherein: performing the divertible operation comprises reading data from blocks allocated to the space identified by the array storage system space reference (col. 7, lines 44-64, Pothapragada); and the operation result information includes an indication that the read operation is complete (col. 5, lines 10-31, Pothapragada).

Regarding claim 6, all the limitations of this claim have been noted in the rejection of claim 5 above. In addition, Pothapragada/Taoda disclose: wherein the step of the updating the file system data management arrangement includes causing the file system processes to modify access data in an entry for the file specified in the read operation (fig. 8 and corresponding text, Pothapragada).

Regarding claim 7, all the limitations of this claim have been noted in the rejection of claim 1 above. In addition, Pothapragada/Taoda disclose: wherein the step of the determining if the file system access operation request includes a divertible operation is performed with a wedge file system interposed between a file system client and the file system processes associated with the data storage apparatus (col. 7, lines 44-64, Pothapragada).

Regarding claim 8, all the limitations of this claim have been noted in the rejection of claim 7 above. In addition, Pothapragada/Taoda disclose: wherein the step of determining if the file system access operation request includes a divertible operation comprises reading a file

Art Unit: 2171

attribute for the file specified in the file system access operation request (308, 312, fig. 1 and corresponding text, Pothapragada).

Regarding claim 9, all the limitations of this claim have been noted in the rejection of claim 7 above. In addition, Pothapragada/Taoda disclose: wherein the step of the determining if the file system access operation request includes a divertible operation comprises reading a file size included in the file system access operation request (310, fig. 1 and corresponding text, Pothapragada).

Regarding claim 10, all the limitations of this claim have been noted in the rejection of claim 1 above. In addition, Pothapragada/Taoda disclose: further including the step of modifying the divertible operation to a form suitable to be performed by the array controller processes (16-21, fig. 3 and corresponding text, Taodo).

Regarding claim 12, all the limitations of this claim have been noted in the rejection of claim 1 above. In addition, Pothapragada/Taoda disclose: wherein the step of determining if the file system access operation request includes a divertible operation is performed by the file system processes (308, 310, fig. 1 and corresponding text, Pothapragada).

Regarding claim 13, all the limitations of this claim have been noted in the rejection of claim 1 above. In addition, Pothapragada/Taoda disclose: wherein the divertible operation comprises a write or a create operation and the step of performing the divertible operation with the array controller processes includes passing data for a file specified in the divertible operation

Art Unit: 2171

directly from a file system client to the array controller processes (col. 7, lines 13-30, Pothapragada).

**4. Claims 11, 14, 17, 23, 27-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pothapragada et al. (U.S 6442682) (Pothapragada) in view of Taoda (U.S 5857459) and further in view of Venkatesh et al. (U.S 5974503) (Venkatesh).**

Regarding claims 11, 17 and 23, most of the limitations of these claims have been noted in the rejection of claims 1, 15 and 21 above, respectively. However, Pothapragada/Taoda didn't disclose: wherein the step of modifying the divertible operation comprises converting the operation from a byte offset operation to a block access operation. On the other hand, Venkatesh disclose: wherein the step of modifying the divertible operation comprises converting the operation from a byte offset operation to a block access operation (col. 40, lines 35-45, Venkatesh). Thus, at the time invention was made, it would have been obvious to a person of ordinary skill in the art to include the step of modifying the divertible operation comprises converting the operation from a byte offset operation to a block access operation in the combination system of Pothapragada/ Taodo as taught by Venkatesh. The motivation being to enable the user to apply the encoding techniques to control the block access in the large file from the storage devices.

Regarding claim 14, all the limitations of this claim have been noted in the rejection of claim 1 above. In addition, Pothapragada/Taoda/Venkatesh disclose: wherein the divertible operation comprises a read operation and the step of performing the divertible operation with the



Art Unit: 2171

array controller processes includes passing data for a file specified in the divertible operation directly from the array controller processes to a file system client (col. 28, lines 55 to col. 29, lines 6, Venkatesh).

Regarding claim 27, all the limitations of this claim have been noted in the rejection of claim 26 above. In addition, Pothapragada/Taoda/Venkatesh disclose: wherein the data processing means comprises: an array controller executing the array controller processes (fig. 10 and corresponding text, Pothapragada); a file system processor executing file system processes and maintaining the file system data management arrangement (col. 27, lines 36-49, Venkatesh).

Regarding claim 28, all the limitations of this claim have been noted in the rejection of claim 26 above. In addition, Pothapragada/Taoda/Venkatesh disclose: wherein the input/output arrangement includes: an input/output port having a physical input/output connection (fig. 11 and corresponding text, Pothapragada); and a network protocol stack component operatively connected to the input/output port (74, fig. 5 and corresponding text, Venkatesh). Thus, at the time invention was made, it would have been obvious to a person of ordinary skill in the art to include a network protocol stack component operatively connected to the input/output port in the combination system of Pothapragada/ Taodo as taught by Venkatesh. The motivation being to enable the user to communicate with the network services using protocol stack to control input/output operations in file system.

Regarding claim 29, all the limitations of this claim have been noted in the rejection of claim 26 above. In addition, Pothapragada/Taoda/Venkatesh disclose: wherein the network

Art Unit: 2171

protocol stack component provides network interface facilities for both the array controller and the file system processor (73, fig. 5 and corresponding text, Venkatesh).

### **5. Contact Information**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cindy Nguyen whose telephone number is 703-305-4698. The examiner can normally be reached on M-F: 8:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Safet Metjahic can be reached on 703-308-1436. The fax phone numbers for the organization where this application or proceeding is assigned are 703-746-7239 for regular communications and 703-746-7240 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

CN

Cindy Nguyen  
April 9, 2003

  
SAFET METJAHIC  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2100